

RAW SEQUENCE LISTING

The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) no errors detected.

Application Serial Number: 10/541,737
Source: PG
Date Processed by STIC: 2/13/06

ENTERED



PCT

RAW SEQUENCE LISTING

DATE: 02/13/2006

PATENT APPLICATION: US/10/541,737

TIME: 15:17:15

Input Set : A:\GC787-2-SEQLIST.TXT

Output Set: N:\CRF4\02132006\J541737.raw

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4 <110> APPLICANT: Leeflang, Chris
5       Van der Kleij, Wilhelmus A.H.
7 <120> TITLE OF INVENTION: Methods for Site-Directed Mutagenesis
8       and Targeted Randomization
11 <130> FILE REFERENCE: GC787-2
13 <140> CURRENT APPLICATION NUMBER: US 10/541,737
14 <141> CURRENT FILING DATE: 2005-07-08
16 <150> PRIOR APPLICATION NUMBER: PCT/US04/01334
17 <151> PRIOR FILING DATE: 2004-01-16
18 <150> PRIOR APPLICATION NUMBER: US 60/440,792
20 <151> PRIOR FILING DATE: 2003-01-16
22 <160> NUMBER OF SEQ ID NOS: 6
24 <170> SOFTWARE: FastSEQ for Windows Version 4.0
26 <210> SEQ ID NO: 1
27 <211> LENGTH: 275
28 <212> TYPE: PRT
29 <213> ORGANISM: Bacillus amyloliquefaciens
31 <400> SEQUENCE: 1
32 Ala Gln Ser Val Pro Tyr Gly Val Ser Gln Ile Lys Ala Pro Ala Leu
33 1           5           10           15
34 His Ser Gln Gly Tyr Thr Gly Ser Asn Val Lys Val Ala Val Ile Asp
35           20           25           30
36 Ser Gly Ile Asp Ser Ser His Pro Asp Leu Lys Val Ala Gly Gly Ala
37           35           40           45
38 Ser Met Val Pro Ser Glu Thr Asn Pro Phe Gln Asp Asn Asn Ser His
39           50           55           60
40 Gly Thr His Val Ala Gly Thr Val Ala Ala Leu Asn Asn Ser Ile Gly
41 65           70           75           80
42 Val Leu Gly Val Ala Pro Ser Ala Ser Leu Tyr Ala Val Lys Val Leu
43           85           90           95
44 Gly Ala Asp Gly Ser Gly Gln Tyr Ser Trp Ile Ile Asn Gly Ile Glu
45           100          105          110
46 Trp Ala Ile Ala Asn Asn Met Asp Val Ile Asn Met Ser Leu Gly Gly
47           115          120          125
48 Pro Ser Gly Ser Ala Ala Leu Lys Ala Ala Val Asp Lys Ala Val Ala
49           130          135          140
50 Ser Gly Val Val Val Val Ala Ala Ala Gly Asn Glu Gly Thr Ser Gly
51 145          150          155          160
52 Ser Ser Ser Thr Val Gly Tyr Pro Gly Lys Tyr Pro Ser Val Ile Ala
53           165          170          175
54 Val Gly Ala Val Asp Ser Ser Asn Gln Arg Ala Ser Phe Ser Ser Val
55           180          185          190
56 Gly Pro Glu Leu Asp Val Met Ala Pro Gly Val Ser Ile Gln Ser Thr

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57          195          200          205
58 Leu Pro Gly Asn Lys Tyr Gly Ala Tyr Asn Gly Thr Ser Met Ala Ser
59          210          215          220
60 Pro His Val Ala Gly Ala Ala Ala Leu Ile Leu Ser Lys His Pro Asn
61 225          230          235          240
62 Trp Thr Asn Thr Gln Val Arg Ser Ser Leu Glu Asn Thr Thr Thr Lys
63          245          250          255
64 Leu Gly Asp Ser Phe Tyr Tyr Gly Lys Gly Leu Ile Asn Val Gln Ala
65          260          265          270
66 Ala Ala Gln
67          275
69 <210> SEQ ID NO: 2
70 <211> LENGTH: 275
71 <212> TYPE: PRT
72 <213> ORGANISM: Bacillus subtilis
74 <400> SEQUENCE: 2
75 Ala Gln Ser Val Pro Tyr Gly Ile Ser Gln Ile Lys Ala Pro Ala Leu
76 1          5          10          15
77 His Ser Cln Gly Tyr Thr Gly Ser Asn Val Lys Val Ala Val Ile Asp
78          20          25          30
79 Ser Gly Ile Asp Ser Ser His Pro Asp Leu Asn Val Arg Gly Gly Ala
80          35          40          45
81 Ser Phe Val Pro Ser Glu Thr Asn Pro Tyr Gln Asp Gly Ser Ser His
82          50          55          60
83 Gly Thr His Val Ala Gly Thr Ile Ala Ala Leu Asn Asn Ser Ile Gly
84 65          70          75          80
85 Val Leu Gly Val Ser Pro Ser Ala Ser Leu Tyr Ala Val Lys Val Leu
86          85          90          95
87 Asp Ser Thr Gly Ser Gly Gln Tyr Ser Trp Ile Ile Asn Gly Ile Glu
88          100          105          110
89 Trp Ala Ile Ser Asn Asn Met Asp Val Ile Asn Met Ser Leu Gly Gly
90          115          120          125
91 Pro Thr Gly Ser Thr Ala Leu Lys Thr Val Val Asp Lys Ala Val Ser
92          130          135          140
93 Ser Gly Ile Val Val Ala Ala Ala Ala Gly Asn Glu Gly Ser Ser Gly
94 145          150          155          160
95 Ser Thr Ser Thr Val Gly Tyr Pro Ala Lys Tyr Pro Ser Thr Ile Ala
96          165          170          175
97 Val Gly Ala Val Asn Ser Ser Asn Gln Arg Ala Ser Phe Ser Ser Ala
98          180          185          190
99 Gly Ser Glu Leu Asp Val Met Ala Pro Gly Val Ser Ile Gln Ser Thr
100          195          200          205
101 Leu Pro Gly Gly Thr Tyr Gly Ala Tyr Asn Gly Thr Ser Met Ala Thr
102          210          215          220
103 Pro His Val Ala Gly Ala Ala Ala Leu Ile Leu Ser Lys His Pro Thr
104 225          230          235          240
105 Trp Thr Asn Ala Gln Val Arg Asp Arg Leu Glu Ser Thr Ala Thr Tyr
106          245          250          255
107 Leu Gly Asn Ser Phe Tyr Tyr Gly Lys Gly Leu Ile Asn Val Gln Ala

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108          260          265          270
109 Ala Ala Gln
110          275
112 <210> SEQ ID NO: 3
113 <211> LENGTH: 274
114 <212> TYPE: PRT
115 <213> ORGANISM: Bacillus licheniformis
117 <400> SEQUENCE: 3
118 Ala Gln Thr Val Pro Tyr Gly Ile Pro Leu Ile Lys Ala Asp Lys Val
119 1          5          10          15
120 Gln Ala Gln Gly Phe Lys Gly Ala Asn Val Lys Val Ala Val Leu Asp
121          20          25          30
122 Thr Gly Ile Gln Ala Ser His Pro Asp Leu Asn Val Val Gly Gly Ala
123          35          40          45
124 Ser Phe Val Ala Gly Glu Ala Tyr Asn Thr Asp Gly Asn Gly His Gly
125          50          55          60
126 Thr His Val Ala Gly Thr Val Ala Ala Leu Asp Asn Thr Thr Gly Val
127 65          70          75          80
128 Leu Gly Val Pro Ser Val Ser Leu Tyr Ala Val Lys Val Leu Asn
129          85          90          95
130 Ser Ser Gly Ser Gly Ser Tyr Ser Gly Ile Val Ser Gly Ile Glu Trp
131          100         105         110
132 Ala Thr Thr Asn Gly Met Asp Val Ile Asn Met Ser Leu Gly Gly Ala
133          115         120         125
134 Ser Gly Ser Thr Ala Met Lys Gln Ala Val Asp Asn Ala Tyr Ala Arg
135          130         135         140
136 Gly Val Val Val Val Ala Ala Ala Gly Asn Ser Gly Asn Ser Gly Ser
137 145         150         155         160
138 Thr Asn Thr Ile Gly Tyr Pro Ala Lys Tyr Asp Ser Val Ile Ala Val
139          165         170         175
140 Gly Ala Val Asp Ser Asn Ser Asn Arg Ala Ser Phe Ser Ser Val Gly
141          180         185         190
142 Ala Glu Leu Glu Val Met Ala Pro Gly Ala Gly Val Tyr Ser Thr Tyr
143          195         200         205
144 Pro Thr Asn Thr Tyr Ala Thr Leu Asn Gly Thr Ser Met Ala Ser Pro
145          210         215         220
146 His Val Ala Gly Ala Ala Ala Leu Ile Leu Ser Lys His Pro Asn Leu
147 225         230         235         240
148 Ser Ala Ser Gln Val Arg Asn Arg Leu Ser Ser Thr Ala Thr Tyr Leu
149          245         250         255
150 Gly Ser Ser Phe Tyr Tyr Gly Lys Gly Leu Ile Asn Val Glu Ala Ala
151          260         265         270
152 Ala Gln
154 <210> SEQ ID NO: 4
155 <211> LENGTH: 269
156 <212> TYPE: PRT
157 <213> ORGANISM: Bacillus lentus
159 <400> SEQUENCE: 4
160 Ala Gln Ser Val Pro Trp Gly Ile Ser Arg Val Gln Ala Pro Ala Ala

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161 1           5           10           15
162 His Asn Arg Gly Leu Thr Gly Ser Gly Val Lys Val Ala Val Leu Asp
163           20           25           30
164 Thr Gly Ile Ser Thr His Pro Asp Leu Asn Ile Arg Gly Gly Ala Ser
165           35           40           45
166 Phe Val Pro Gly Glu Pro Ser Thr Gln Asp Gly Asn Gly His Gly Thr
167           50           55           60
168 His Val Ala Gly Thr Ile Ala Ala Leu Asn Asn Ser Ile Gly Val Leu
169 65           70           75           80
170 Gly Val Ala Pro Ser Ala Glu Leu Tyr Ala Val Lys Val Leu Gly Ala
171           85           90           95
172 Ser Gly Ser Gly Ser Val Ser Ser Ile Ala Gln Gly Leu Glu Trp Ala
173           100          105          110
174 Gly Asn Asn Gly Met His Val Ala Asn Leu Ser Leu Gly Ser Pro Ser
175           115          120          125
176 Pro Ser Ala Thr Leu Glu Gln Ala Val Asn Ser Ala Thr Ser Arg Gly
177           130          135          140
178 Val Leu Val Val Ala Ala Ser Gly Asn Ser Gly Ala Gly Ser Ile Ser
179 145          150          155          160
180 Tyr Pro Ala Arg Tyr Ala Asn Ala Met Ala Val Gly Ala Thr Asp Gln
181           165          170          175
182 Asn Asn Asn Arg Ala Ser Phe Ser Gln Tyr Gly Ala Gly Leu Asp Ile
183           180          185          190
184 Val Ala Pro Gly Val Asn Val Gln Ser Thr Tyr Pro Gly Ser Thr Tyr
185           195          200          205
186 Ala Ser Leu Asn Gly Thr Ser Met Ala Thr Pro His Val Ala Gly Ala
187           210          215          220
188 Ala Ala Leu Val Lys Gln Lys Asn Pro Ser Trp Ser Asn Val Gln Ile
189 225          230          235          240
190 Arg Asn His Leu Lys Asn Thr Ala Thr Ser Leu Gly Ser Thr Asn Leu
191           245          250          255
192 Tyr Gly Ser Gly Leu Val Asn Ala Glu Ala Ala Thr Arg
193           260          265

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195 <210> SEQ ID NO: 5

196 <211> LENGTH: 27

197 <212> TYPE: DNA

198 <213> ORGANISM: Artificial Sequence

200 <220> FEATURE:

201 <223> OTHER INFORMATION: primer

203 <400> SEQUENCE: 5

204 gtgtgtgggc ccatcagtct gacgacc

27

206 <210> SEQ ID NO: 6

207 <211> LENGTH: 27

208 <212> TYPE: DNA

209 <213> ORGANISM: Artificial Sequence

211 <220> FEATURE:

212 <223> OTHER INFORMATION: primer

214 <400> SEQUENCE: 6

215 gtgtgtgggc cctattcgga tattgag

27

VERIFICATION SUMMARY

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